

12/15/45 Rgm.

YALE UNIVERSITY
OSBORN BOTANICAL LABORATORY
NEW HAVEN, CONNECTICUT

December 15, 1945

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Dr. Ralph G. Meader
Jane Coffin Childs Memorial Fund
for Medical Research
328 Cedar Street

Dear Dr. Meader:

I would like to outline briefly the basis for my suggestion that Mr. Joshua Lederberg apply to the Jane Coffin Childs Fund for support which will enable him to work with me for a few months this coming year. I feel that Mr. Lederberg has exceptional ability and promise for research. I have met and talked to him and have discussed research work which he has been carrying on with Dr. Ryan, both with him and with Dr. Ryan. I have been quite well impressed with Lederberg personally, and with his scientific abilities, and have the utmost confidence in Dr. Ryan's opinion of his qualifications.

It seems to me that a brief period spent in intensive critical research will be of great value both to Lederberg and to our general research program. In brief, the main proposed problem will involve the development of experimental tests for the existence of sexual phases in life cycles of certain unicellular microorganisms. In this work a number of "bio-chemical" mutant strains of bacteria are now available which, in my opinion, may make it possible to attack this question with some promise of success. If this is possible, we hope that the principles developed might be applicable to similar investigations into genetic changes in mammalian cells, perhaps in tissue culture. A second related problem will involve the continuation of Lederberg's present investigations into the genetic basis of certain "adaptive" biochemical modifications in mutant strains of *Neurospora*. This problem also has possibilities in its application to the question of genetic basis of cancer.

There should be a number of advantages in Lederberg's carrying on these projects here. Perhaps the most important

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of these would be the further development of a critical approach to and evaluation of research problems. A second point would be the broadening of his knowledge of the general field involving the relation of the gene and biochemical and physiological characters. Both of these should be of great value in the development of his potentialities for medical research.

I can assure you that on our side, we would welcome enthusiastically Lederberg's cooperation in our program. The development of criteria for the existence of sexual phases in bacteria is one of extreme importance and one which we are anxious to pursue. Furthermore, our group is greatly interested in the other phases of biochemical genetics which Lederberg hopes to complete. In conclusion, may I state again that I greatly appreciate your consideration of Mr. Lederberg's application.

Sincerely,



E. L. Tatum
Associate Professor of Botany

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